XPS-100

System Bulletin
Vol. 1 VF20
(For 16 and 25 MHz
Systems)

Worldwide
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XPS-100

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SUBJECT
General Hardware and Software Information for the System

The following notice is provided in accordance with the United States Federal Communications Commission's (FCC) regulations.

> Warning: This equipment generates, uses, and can radiate radio frequency energy and if not installed and used in accordance with the instruction manual, may cause interference to radio communications. The equipment manufactured after October 1, 1983 has been tested and found to comply with the limits for a Class A computing device pursuant to Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference when operated in a commercial environment. The equipment manufactured prior to October 1, 1983 has not been tested for compliance. Operation of this equipment in a residential area is likely to cause interference in which case the user at his own expense will be required to take whatever measures may be required to correct the interference.

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File No.: 1X03, 1X33

PREFACE

This document contains three sections as follows:

Section I : Contents of the System Disk
Section II : Notices and Temporary Restrictions
Section III : Modifications to Operating System Documentation

CONTENTS

CONTENTS (cont.)

SECTION I

CONTENTS OF THE SYSTEM DISK

All the UNIX SYSTEM V RUNTIME standard files are provided in the system disk with the addition of the following:

backup
conlog
diskinit
dupvol
easyconf
easylife
hrestore
hsave
ibmread
ibmwrite
INAT
IXS
mustrun
pkprint
savrest
selrestore
selsave
star
stl
tapereel
termconf
upsstat
whatis

SECTION II

NOTICES AND TEMPORARY RESTRICTIONS

NOTE: The following bootstrap diskettes are supplied with the system:

DKT 'BOOT1'
DKT 'COMMANDS'
DKT 'BOOT1-INSTALL'
DKT 'BOOT2'

The *DKT 'BOOT1'* diskette contains:

kernel
bootstrap

The *DKT 'COMMANDS'* diskette allows the following commands to be used:

cat	**inittab**	**rm**
checktail	**ln**	**savrest**
cp	**ls**	**sh**
cpio	**mkdir**	**su**
diskinit	**mkfs**	**sync**
echo	**mknod**	**tailoring**
hrestore	**mnttab**	**umount**
installunix	**mount**	
init	**passwd**	

The *DKT 'BOOT1-INSTALL'* diskette contains:

kernel
bootstrap

The *DKT 'BOOT2'* diskette allows a disk/slice to be saved/restored on/from cartridge.

WARNING

This procedure is valid just in the case the streamer unit is connected to the DCS board If the streamer is connected to the DCE board, use the command *savrest* contained in the *COMMANDS* diskette.

BSC 2780/3780

Connection with the DOS

The 2780 configurator file, */usr/lib/bscbatch/2780*, containing the physical and logical characteristics of the transfer, must be configured using the *vi* command. Here is an example:

```
DEVICE=/dev/bscx
DUPLEX=HALF/FULL
SIGNON=/usr/spool/bscbatch/2780/signon
BLKSIZE=400
RECSIZE=80
RECBLK=NO
COMPRESS=NO
```

where **x** is the specific device.

Connection with DPS4

The dps4 configurator file, */usr/lib/bscbatch/dps4*, containing the physical and logical characteristics of the transfer, must be configured using the *vi* command. Here is an example:

```
DEVICE=/dev/bscx
DUPLEX=HALF/FULL
BLKSIZE=400
RECSIZE=80
RECBLK=NO
```

where **x** is the specific device.

Connection with DPS6

The following patch, W9119ART, is required to run BSC 2780 to the DPS6 on the MOD400 Release 3.1 Operating System:

```
EP W9119ART
SP W9119ARRT
/1A02;(2D3F,030D;B 2AB6)
/2AB6;(CCC7;CMV $R2,19)
BE 1A44
DC 2D3F
BG 1A10
B 1A0F
/1AAD;(2D3F,302;B 2AC2)
/2A08;(CCC7;CMV $R2,19)
BE 1AB2
DC 2D3F
BG 1AB0
B 1AAF
```

The dps6 configurator file, */usr/lib/bscbatch/dps6*, containing the physical and logical characteristics of the transfer, must be configured using the *vi* command. Here is an example:

```
DEVICE=/dev/bscx
DUPLEX=HALF/FULL
RECSEP=EM
BLKSIZE=400
UNITSEP=YES
RECSIZE=80
RECBLK=2
COMPRESS=NO
TIMEOUT=10
```

where **x** is the specific device.

Before performing the file transfer using *vi*, enter three times the combination of *CTRL V* followed by *ESC 4*, at the head of each file to be transferred. At the tail of each file enter two oblique strokes, //.

Connection with DPS8

The dps8 configurator file, */usr/lib/bscbatch/dps8*, containing the physical and logical characteristics of the file transfer, must be configured using the *vi* command. Here is an example:

```
DEVICE=/dev/bscx
DUPLEX=HALF/FULL
RECSEP=EM
BLKSIZE=400
UNITSEP=YES
RECSIZE=80
RECBLK=4
COMPRESS=NO
```

where **x** is the specific device.

The following initial statements must be included at the head of each file to be transferred:

```
$*$CNR RBF,XXXX,AZZ:I
$*$RCD
$ SNUMB KKKKK
$ IDENT YYYYYYYYYYY     ,AAAAAA
$ USERID WWWWWWWW
$ UTILITY
$ FUTIL IN,OT,REW/IN,OT/,COPY/1F/,REW/IN,OT/
$ PRMFL OT,W,S,directory/filename
$ DATA IN
```

where:

ZZ	is the identifier of the job
KKKKK	is the name of the job
XXXX	is the name of the node
YYYYYYYYYYY	is the user's private name
AAAAAA	is the name of the your station
WWWWWWWW	is the user's identifier and the password (if present).

NOTE: The $*$CNR statement must only preceed the first job.

Each file to be transferred, must end with the following statements:

```
$          ENDJOB
EOF
```

If there are several files to be transferred, the last of them, must end with the following statements:

```
$          ENDJOB
$*$STS
EOF
```

Connection with DPS8 DATANET Configured

Here is an example of configuration for a BSC 2780 line on DNS300 (DATANET):

```
MB 2780 TMG
TX 2780 TMG -SN 2780 -MB 2780
SN 2780 TMG -LD 2780 -CD 2780
LD 2780 TMG -DV 2780
DV 2780 2780 -MR -NOSDIN -LN 2780 -MD 2780E -TODISC
6000 -MANLOGO& -LL 2780
LL 2780 2780 -T2 80 -SYN X'32' -NBSYN 3 -RR 10 -RVI
-SECO -T8 600& -EBCD -PL 2780
PL 2780 SYN -PHTP 2158 -PHAD X'3800' -HALF -SWITCH
3000 -CT CT06
CO 2780 TMG -DMB RBF -CD 2780 -SCID H005
UD 2780 TMG -CD 2780 -LN 2780
LN 2780 TMG -EXPCN
CD TMG -CO 2780
```

Two suggestions are:

1. Remove the **$*SDIS** card altogether.

2. Insert the parameter ***RVIMODE=IGNORE*** into the host configuration file.

BSC 3270 EMU

If ***BSC*** File Transfer is to be used for the first time, check that the configuration screen for the terminal in question exists. If it is not present, it must be created; see the ***EMKEYMAP*** command in the "BSC 3270 EMU" manual.

Connection with 3270 in Multipoint Mode

The 3270 configurator file, ***/usr/lib/bscbatch/3270***, containing the physical and logical characteristics of the file transfer, must be configured through the ***vi*** command. Here is an example:

```
CODE=EBCDIC
DEVICE=/dev/bscXm0-Y
DUPLEX=HALF/FULL
MPTADDR=ZZ
```

where:

- **X** is the specific device.
- **Y** is the specific station number.
- **ZZ** is the station address.

Connection with DPS8/DPS7 DATANET Configured

Here is an example of the configuration for a BSC 3270 line on DNS200:

```
DV  HONEY0 3270 -MODEL 3276-2 -PHAD 0 -CL CLIV
DV  HONEY1 3270 -MODEL 3276-2 -PHAD 1 -CL CLIV
DV  HONEY2 3270 -MODEL 3276-2 -PHAD 2 -CL CLIV
CL  CLIV 3270 -PHAD 0 LL LLIV
LL  LLIV 3270 -EBCD -PL BOB1 -T2 80 -T3 90 -T4 3 -T5
    65 -T6 90 -T7 40
PL  BOB1 SYN -PHTP 2158 -PHAD X'chan' -HALF -DIRECT
    -CT CT02
```

Here is an example of the configuration for a BSC 3270 line on DNS300:

```
DEVICE HONEY0 3270 -MD 3276-2 PHAD 0 -CL CLIV
DEVICE HONEY1 3270 -MD 3276-2 PHAD 1 -CL CLIV
DEVICE HONEY2 3270 -MD 3276-2 PHAD 2 -CL CLIV
CL  CLIV 3270 -PHAD 0 LL LLIV
LL  LLIV 3270 -EBCD -PL BOB1 -T2 80 -T3 90 -T4 3 -T5
    65 -T6 90 -T7 40 X'32' -NBSYNC 4
PL  BOB1 SYN -PHTP 2158 -PHAD X'chan' -HALF -DIRECT
    -CT CT02
```

C-ISAM

In C-ISAM 3.00, when *isclose* is called, the files are not physically closed. They are only flagged for closure, i.e. virtually closed. The files are closed physically only when the system has reached the maximum number of open files it can handle and *isopen* is called. In this case, *isopen* physically closed one of the virtually closed *C-ISAM* files. This causes a problem if normal UNIX files must then be opened, because the virtually closed *C-ISAM* files are still using descriptors which cannot be used by other UNIX files. It is recommended that UNIX files be opened first, leaving *C-ISAM* files management to *isopen* and *isclose* functions as above.

LEVEL II COBOL/ET Rel. 1.1.5

Getting Started with Level II Cobol/ET

Contrary to the explanation provided in the manual, it is necessary to use one of the following commands to print a file listing:

```
lp filename.LST
```

```
cat filename.LST >/dev/lp
```

In fact, the *lpr* spooler mentioned in the manual is replaced by *lp* in the current release.

"Installation of FORM-2 or Animator": before going to step 2 in this paragraph, point 2 of the paragraph "Installation of LEVEL II COBOL/ET run-time" must be executed.

VS Cobol Supplementary Series Source Convertion Manual

The manual is only valid for the documentation of the *CONVERT3* utility. All information regarding *UPGRADE 3* must be ignored, as the *UPGRADE III* documentation in the "OPERATING GUIDE" is valid.

Software Issue Bulletin

Additional Information:

Whenever the compiler finds an error, it sounds the terminal bell. To do this, the compiler uses the *ADIS* (*ACCEPT/DISPALY*) utility to look up the bell character in the file */usr/lib/cobol/termdesc*. *ADIS* disable the normal UNIX interrupts. If you want to be able to interrupt the compiler, you must either use the compiler directive *NOBELL* to turn off the terminal bell or use the compiler directive *BELL\"07\"* to set the bell character to the hexadecimal character expected by your terminal.

You can make either of these the system default with the = compiler directive, provided this does not conflict with any terminal attached to the system.

Operating Guide

Page 5.11:

The key *CO33%1* mentioned in the manual, is wrong. It should be replaced with *C33%1*.

To define the character "!" as an exception key, you would specify:
C33%1

EASYLIFE

The menu listing contained in the "EASYLIFE USER GUIDE" reflects the standard software supplied at the time of this release. The manufacturers reserve the right to change menus as new products are developed. The user will find details of new entries in the corresponding manuals.

When using *Easylife* on HDS71XX terminals, the *Full reverse* and *Partial reverse* personalizations may not be selected for the parameters in the masks. The parameters must be personalized as *No reverse*.

RM/COBOL-85

It is possible to use mixed visual attributes (e.g., *blink+reverse+low*) by inserting *sgr*, *sgr0* and *xmc* fields into the terminal's *TERMINFO* entry. The field for each single visual attributes (*dim*, *rev*, *blink*, etc.) must also be specified. For more information about constructing one of these entries see the documentation about the *TERMINFO* database.

A list of the fields for the VTU004X-VTU005X terminals follows:

```
xmc=1,
smso=\Esi, rmso=\Esr,
sgr=\Esr%?%p3%t\Esi%;%?%p4%t\Esb%;%?%p5%t\Esl%;,
sgr0=\Esr,
dim=\Esl,
blink=\Esb,
rev=\Esi,
```

A list of the fields for the HDS71XX terminals (WYSE50 personalization) follows:

```
sgr=%{0}%?%p3%t%{4}%+%;%?%p4%t%{2}%+%;%?%p5%t%
{112}%+%e%{48}%+%;\EG%c,
xmc#1,
```

A list of the fields for the HDS74XX terminals (VT100 personalization) follows:

```
sgr=\E[%?%p1%t;7%;%?%p2%t;4%;%?%p3%t;7%;%?%p4%t;
5%;%?%p5%t;8%e;1%;%?%p6%t;1%;m,
```

Using the VTU001X terminal with 24x80 screen, a scroll of the first line occures. To solve the problem, set the ***AUTO LF/CR*** parameter to ***OFF*** in the terminal setup. Add the variable ***am*** to the terminal's ***TERMINFO*** entry, ***/usr/lib/terminfo/src/honeywell.ti***.

After editing the file, make the modifications active by using the following command:

```
# tic honeywell.ti
```

The first line is no longer scrolled. However, you will lose the last character of the first line.

WARNING

These modifications to the terminal's setup and to *TERMINFO* are only valid for RM/Cobol-85; they could cause problems when using other packages.

CONNECTION WITH OTHER SYSTEMS

For a right dialogue with DPS6 system, DPS6 should have GCOS6 rel.4 installed.

HARDWARE

With the board *DCE* installed in the system, it is not possible to use the third slot of the memory expansion board (*MEM3*) because of power supply problems.

For the *SP1*, *SP2* and *LP0* boards, the *RINGH INDICATOR* functionality is supported

LAN

In order to execute the appropriate Diag Operating System test, it is necessary to install the *DIAGLAN* diskette in the following way:

```
# cd /
# mount /dev/fdsk0 /mnt
# cd /mnt/ins
# sh installan
# cd /
# umount /dev/fdsk0
```

OPERATING SYSTEM

Commands

BACKUP (1)

Files whose pathname contain special character ($, ", ^, &, /, \, #, *, !, |, ', P, „ ?) are not supported.

The backup command uses the */usr/lib/diskbackp* file for the incremental save operation. The removal of this file prevents the operation from being completed successfully.

CC(1)

The *-p* option is not supported.

With the disk level VF/20, the *C-Compiler* does not allow for the following type of assignment:

```
nargv[i-1]=argv[i++]
```

Such assignments must be substituted with the following:

```
i++
nargv[i-MM=argv[i]
```

DIAG: test controlled by Operating System.

v. VME BUS test

The *HELP* command is temporarily not supported.

DISKINIT(1M)

When you have more times the same disk message error of cylinder, head and sector, it is necessary to insert in the bad map table, the news bad informations. The following relations provides to change the sector number show in the error to the B.C.A.I. required to the diskinit.

```
If sector is = 0,
        B.C.A.I. = 27
else
        B.C.A.I. = Sector Number * (60+512) + 27 - 1
```

SAG(1G)

The *sag (1G)* command -display system activity in a graphical form- is not implemented. As a result, the *saghdr.h* and *saga.c* & *sagb.c* files are not available.

SXT(7)

This script allows the user to automatically create the */dev/sxt* directory and the relative nodes to the pseudo-device drivers which can be associated to each terminal. The input to the script must be the logical board number and the terminal line number (see *Appendix A* in the "System Operations Guide").

```
if [$# = 0]
then
  echo devshl boardnum slotnum [create nodes for shl
                          on this tty port]
  exit 1
fi
if [! -d /dev/sxt]
then
  mkdir /dev/sxt
fi
MAJOR='expr $1 / 2'
MAJOR='expr $MAJOR + 86'
BOARD='expr $1 % 2'
for i in 0 1 2 3 4 5 6 7
do
  echo mknod /dev/sxt/$1$2$i c $MAJOR \
  'expr $i+$2 \* 8+$BOARD \* 128'
  mknod /dev/sxt/$1$2$i c $MAJOR \
  'expr $i+$2 \* 8+$BOARD \* 128'
do
```

UUCP (1c)

Chapter 10 of the "ADMINISTRATOR GUIDE" is titled "UUCP Administration". Pages 10-6 thru 10-8 contain descriptions of the parameters of the System File. On pages 10-7 and 10-8 there is a description of the login parameter. It is recommended that the user enter only the null string, "", followed by a login name. The null string signifies that no characters are initially expected from the remote host.

In this case, a typical entry in the *L.sys* file, would resemble the following:

```
maria Any tty07 9600 tty07 "" nuucp
```

The string *nuucp* is the login name. Before using any intelligent communication device (smart, modem, multiplexer) with *cu/uucp*, it should be set to '8-bits no parity'. Furthermore, the user should not enter extraneous characters not supported by the *uucp* protocol.

UUCP NOTES:

Internal Programs:

uugetty This program is very similar to the *getty* program except it permits a line (port) to be used in both directions. A *uugetty* will be assigned to a port in the *etc/inittab* file if bidirectional is chosen when you modify a port. *uugetty* is executed as a function of the init program and is described in the "ADMINISTRATOR REFERENCE MANUAL".

AdministrItive File:

LCK(lock file) *Lock* files are created in the */usr/spool/locks* directory for each device in use. *Lock* files prevent duplicate conversations and multiple attempts to use the same calling device. The names of *lock* files have the format:

```
LCK..str
```

where *str* is either a device or computer name. These files may remain in the *spool* directory if the communications link is unexpectedly dropped (usually on computer crashes). The *lock* files will be ignored (removed) after the parent process is no longer active. The *lock* file contains the process ID of the process that created the lock.

Making Changes to the /etc/inittab File:

There are two versions of the Basic Networking Utilities. The differences between them are reflected in the */etc/inittab* file. The newest version allows for bidirectional login capability by respawning *uugetty* instead of *getty*. This means that if two computers (both using *uugetty*) were connected via a direct link, either of these computers could request communication with the other. This would not be true if only one computer was capable of respawning *uugetty*.

If the direct link is connecting your system with a computer that has the new version of basic networking, the */etc/inittab* files on both computers should be set up to allow "bidirectional" traffic on the associated lines. This means that the lines used must respawn *uugetty* on each end of the link. This would allow either computer to request communication with the other.

If the direct link is connecting your system with a computer that does not have the new version of basic networking, the */etc/inittab* file would be set up differently on each system. The */etc/inittab* file on each computer would be set up to allow either "incoming" or "outgoing" traffic on its line. If one computer allows incoming traffic, the other must allow only outgoing traffic. A *uugetty* could not be used on either computer in this case.

VI (1)

If *vi* is called, and *Standard Error* has been redirected, the screen will be set up incorrectly.

Errors

After a *floating point trap*, it is recommended to shutdown and reinitialize the system.

Library

Despite returning a value of 1, the *TGETENT* library does not work correctly.

Parameters

NILIST must not be modified.

ORACLE

Before executig an ORACLE work session, the user must enter into the "*$ORACLE_HOME/dba/osh.c*" file and substitute the instruction

```
for (i=1; argv[i] != NULL; nargv[i-1] = argv[i++]);
```

with the following instructions:

```
for (i=1; argv[i] != NULL; i++);
   nargv[i-1] = argv[i];
```

Should this not be done, the "*osh.c*" program will not execute in a correct manner.

SQL/C-SVS

Compiling embedded SQL/C-SVS Routines

In order to allow the usage of the SVS-C compiler instead of the AT&T-C compiler a macro named *CC is* provided. It is a filter which convert all the parameters given by the user to the *cc* command into the correspondent parameters for the SVS-C compiler (if meaningful) and finally invokes the SVS-C compiler. Therefore it is sufficient to replace the *cc* command with *CC* wherever it occurs in the *esql*, *cace* and *cperf* shell scripts.

```
#
# This shell script is a filter to allow the use of the "make"
# command:
#       just write "CC" instead of "cc" and all the parameters will be
#       recognised and substituted with the correspondent SVS
#       parameters
#       (when meaningful)
#
CARGS=
CCFARGS=
CFILES=
FPOINT=+f
IFILES=
QUIETNESS=+q
nolink=
verbose=

#
#process the arguments
#
while expr "$#" \> "0" >/dev/null
do
    case "$1" in
    -B* | -T | -W | -p | -t | -E | -P | -S | -g )
        echo "$0: the $1 option is not supported by SVS-C"
        nogo=YES
        ;;
    -D* | -U* | -I* )
        CARGS="$CARGS$1 "
        ;;
-L* | -M | -N | -V | -VS* | -e* | -l* | -m | -o* | -r | -s | -u* | -x)
        CCFARGS="$CCFARGS$1 "
        ;;
-O )
        # Silently ignored
        ;;
```

```
-c )
    nolink=YES
    ;;
-f )
    FPOINT=-f
    ;;
-v )
    QUIETNESS=-q
    verbose=YES
    ;;
-* )
    echo "$0: Unrecognized option '$1'"
    nogo=YES
    ;;
*.c )
    CFILES="$CFILES$1 "
    IFILES="$IFILES$1 "
    CCFARGS="$CCFARGS$1 "
    ;;
*.i )
    CFILES="$CFILES$1 "
    IFILES="$IFILES$1 "
    CCFARGS="$CCFARGS$1 "
    ;;
*.o )
    CCFARGS="$CCFARGS$1 "
    ;;
* )
    [CFARGS="$CCFARGS$1 "
esac
shift
done
```

```
#
# Was there an error in the argument processing
#
if [ "$nogo" ]
then
        exit 1
fi
#
# Fix up the file names for the different passes. Done in one lump here
# to save on multiple invocations of sed.
#
CFILES=`echo "$CFILES" | sed 's/\.i /.c /g'`
IFILES=`echo "$IFILES" | sed 's/\.c /.i /g'`
CCFARGS=`echo "$CCFARGS" | sed 's/\.[ci] /.o /g'`
#
# First pass - the preprocessor
#
if [ x"$CFILES" != x"" ]
then
        if [ "$verbose" ]
        then
                echo c $CFILES $CARGS $FPOINT $QUIETNESS -p
        fi
        for f in $CFILES
        do
                if c $f $CARGS $FPOINT $QUIETNESS -p
                then
                        :
                else
                        nogo=YES
                fi
        done
fi
if [ "$nogo" ]
then
        exit 1
fi
```

```
#
# Second/third pass - the actual compiler
#
if [ x"$IFILES" != x"" ]
then
        if [ "$verbose" ]
        then
                echo jcode $IFILES
                echo jlinker `echo "$IFILES" | sed 's/\.i / /g'`
        fi
        for f in `echo "$IFILES" | sed 's/\.i / /g'`
        do
                if jcode $f.i && jlinker $f
                then
                        :
                else
                        nolink=YES
                fi
        done
        rm -f `echo "$IFILES" | sed 's/\.i /.obj /g'`
fi
if [ "$nolink" ]
then
        exit 0
fi

#
# Finally link
#
if [ "$verbose" ]
then
        echo ccf $CCFARGS -ls -lp
fi
ccf $CCFARGS -ls -lp
```

TERMINALS

HDS71XX and HDS74XX

If *Easylife* is to be used with HDS71XX and HDS74XX terminals, refer to the note concerning *Easylife* in this chapter.

HDS74XX - VT200 Personalization

This type of personalization allows 20 different functions to be invoked: unfortunately, the first five are implemented via local function keys, reserved for use with the terminal. Consequently there is a difference of five position between the function keys and the functions to which they refer. The new combinations of function keys and their relative functions are as follows:

function key F6	**fk1**
function key F7	**fk2**
function key F8	**fk3**
function key F9	**fk4**
function key F10	**fk5**
function key F11	**fk6**
function key F12	**fk7**
function key F13	**fk8**
function key F14	**fk9**

VTU004X/VTU005X

For these terminals, the variable *cr* has not been defined. To define it, the user should add:

```
cr=^M
```

to the corresponding entries for these terminals in the file */usr/lib/terminfo/src/honeywell.ti*. Furthermore, to support lines longer than 80 characters, the user must delete the variable *ill*.

Enter the following command to execute all the modifications:

```
# tic honeywell.ti
```

WARNING

Before executing this command, the user should verify that the system *terminfo* is being used (the *TERMINFO* variable should have the following value: *TERMINFO=/usr/lib/terminfo*).

VIPEMU - VIP78XX/VIP77XX

The VIP77XX terminal emulation is not qualified.

UNIFY

When this package is installed, the pathname of the installation directory must be specified. If *Unify* has been installed in */usr/unify/bin*, this directory must be added to the list of the *PATH* of the directory in which the system will search for the program installed. To do this, you could type:

```
PATH=/usr/unify/bin:/bin/usr/bin
```

assuming you are using the Bourne Shell. Or you could type:

```
PATH=:/usr/unify/bin$PATH
```

where *$PATH* means to substitute the current value of the variable *PATH*.

If the option *Rebuild the hash table* (rekey) is required, it is recommended that it be used only as the first operation of a *UNIFY* session. If necessary exit the current session and re-enter *UNIFY* before using this option.

During the *Rebuilt the hash table* operation, the following message may be displayed:

```
Hash table length is non-prime. System performance can
be enhanced by changing the hash table length to a
prime value.
Would you like to change the Hash Table length from
xxxxx to yyyyy?
```

It so, it is recommended to reply *n* and instead use the ***Reconfigure Data Base*** (*scom*) option to make the changes.

HDS71XX Terminal

If *Unify* is used with HDS71XX terminal, the sequences corresponding to the cursor positioning and function keys must be entered in the *lib/unicap* file in the directory in which *Unify* has been installed. Enter the following instructions in the file:

```
SECTION = wyse 50                    Wyse 50 input sequences

left_arrow = ^H                      left arrow
down_arrow = ^V                      down arrow
right_arrow = ^L                     right arrow
up_arrow = ^K                        up arrow
f1 = ^A@^M                           F1
f2 = ^AA^M                           F2
f3 = ^AB^M                           F3
f4 = ^AC^M                           F4
f5 = ^AD^M                           F5
f6 = ^AE^M                           F6
f7 = ^AF^M                           F7
f8 = ^AG^M                           F8
f9 = ^AH^M                           F9
f10 = ^AI^M                          F10
```

HDS74XX Terminal - VT200 Personalization

If *Unify* is used with HDS74XX terminal, the sequences corresponding to the cursor positioning and function keys must be entered in the *lib/unicap* file in the directory in which *Unify* has been installed. Enter the following instructions in the file:

```
SECTION = vt200                 vt200  input sequences

left_arrow = \E[D               left arrow
right_arrow = \E[C              right arrow
up_arrow = \E[A                 up arrow
down_arrow = \E[B               down arrow
f1 = \E[17~                     F6
f2 = \E[18~                     F7
f3 = \E[19~                     F8
f4 = \E[20~                     F9
f5 = \E[21~                     F10
f6 = \E[23~                     F11
f7 = \E[24~                     F12
f8 = \E[25~                     F13
f9 = \E[26~                     F14
```

Check that the entry in the *lib/termcap* file in the directory in which *Unify* has been installed, is the following:

```
d2|vt200|vt-100|pt100|pt-100|dec vt100:\
        :co#80:li#24:am:cl=50\E[;H\E[2J:bs:cm=5\E[%i%
        2;%2H:nd=\E[C:up=\E[A:\
        :ce=3\E[K:cd=50\E[J:is=\E>\E[?31\E[?41\E[?51\
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```

SECTION III

MODIFICATIONS TO THE OPERATING SYSTEM DOCUMENTATION

UPDATING TO THE PRINTED DOCUMENTATION

To update the last version of these manuals, remove the old pages and insert, in alphabetic order, the new pages.

User Reference Manual

Remove	Insert
ibmread(1)	ibmread(1)
ibmwrite(1)/id(1)	ibmwrite(1)/id(1)
ipcs(1)/iXS(1)	ipcs(1)/iXS(1)
od(1)	od(1)

Administrator Reference Manual

Remove	Insert
conlog(1M)	conlog(1M)
mustrun(1M)/mvdir(1M)	mustrun(1M)/mvdir(1M)
runacct(1M)/sadp(1M)	runacct(1M)/sadp(1M)
sxt(7)	sxt(7)

NAME

ibmread - copying files from IBM diskette

SYNOPSIS

ibmread /dev/name [-o] [files...]

DESCRIPTION

This command is used to copy one or more files from an IBM floppy to the system disk.

The copy is performed in the directory in which the user is currently working. The copy maintains the same file names as on the IBM floppy (upper case format as used in IBM files).

If the floppy contains files with the same names as those already present in the system, the copy causes the new files to be written over the old files. Therefore, the user is advised to create a special directory to which the files will be copied.

The files that can be copied by means of this procedure must have the following characteristics:

they must not multi-volume
they must not have tree structure

This command must be run from the directory in which the user wants to copy the files.

The command has the following arguments:

name is the symbolic identifier of the IBM floppy from which the file is to be copied. If the floppy is:

floppy 9 sectors/track double side	name=fdibmd9
floppy 9 sectors/track single side	name=fdibms9
floppy 8 sectors/track double side	name=fdibmd8
floppy 8 sectors/track single side	name=fdibms8
high density	name=fdibmhd

-o If the files to be copied do not contain source programs (e.g., data file, object file), *name* must be followed by the -o option.

files To specify the names of the files to be copied. The name may consist of up to 8 characters followed by a full stop and 3 other characters. If no file name is specified the entire contents of the floppy are copied.

SEE ALSO

Ibmread: Copying Files from IBM Diskettes and *How to Create Nodes for Use of Non-native Diskettes* in the *System Operations Guide*.

WARNINGS

Empty files are transferred.

If during the copy of object file, the -o option is not used, these files not be executable.

NAME

ibmwrite - copying files from the system to the IBM diskettes

SYNOPSIS

ibmwrite /dev/name [-o] [files...]

DESCRIPTION

This command is used to write one or more files from the system to the IBM floppy, prior to converting the name from lower case to upper case characters as used in IBM files.

If the floppy conatins a file with the same name of that under copy, the copy is interrupted for it and the following message appears:

ibmwr09 file ... is already present! (not replaced)

The command has the following arguments:

name Is the symbolic identifier of the IBM floppy to which the file is to be copied. If the diskette is:

floppy 9 sectors/track double side	name=fdibmd9
floppy 9 sectors/track single side	name=fdibms9
floppy 8 sectors/track double side	name=fdibmd8
floppy 8 sectors/track single	name=fdibms8
high density	name=fdibmhd

-o If the files to be copied do not conatin source programs (e.g., data file, onject file), *name* must be followed by the -o option.

files To specify the names of the files to be copied. The name may consist of up to 8 characters followed by a full stop and 3 other characters. At least one filename must always be present. It is possible to specify complete pathnames to specify the names of the files (when they are to be copied from different directories).

SEE ALSO

Ibmwrite: Copying Files from the System to the IBM Diskette and *How to Create Nodes for Use of Non-native Diskettes* in the *System Operations Guide*.

WARNINGS

Empty files are transferred.

If during the copy of object file, the -o option is not used, these files will be ruined.

NAME

id - print user and group IDs and names

SYNOPSIS

id

DESCRIPTION

Id **writes a message on the standard output giving the user and group IDs and the corresponding names of the invoking process. If the effective and real IDs do not match, both are printed.**

SEE ALSO

logname(1).
getuid(2) in the *UNIX System V Programmer Reference Manual*.

GROUP	(all)	The group name of the group of the owner of the facility entry.
CREATOR	(a,c)	The login name of the creator of the facility entry.
CGROUP	(a,c)	The group name of the group of the creator of the facility entry.
CBYTES	(a,o)	The number of bytes in messages currently outstanding on the associated message queue.
QNUM	(a,o)	The number of messages currently outstanding on the associated message queue.
QBYTES	(a,b)	The maximum number of bytes allowed in messages outstanding on the associated message queue.
LSPID	(a,p)	The process ID of the last process to send a message to the associated queue.
LRPID	(a,p)	The process ID of the last process to receive a message from the associated queue.
STIME	(a,t)	The time the last message was sent to the associated queue.
RTIME	(a,t)	The time the last message was received from the associated queue.
CTIME	(a,t)	The time when the associated entry was created or changed.
NATTCH	(a,o)	The number of processes attached to the associated shared memory segment.
SEGSZ	(a,b)	The size of the associated shared memory segment.
CPID	(a,p)	The process ID of the creator of the shared memory entry.
LPID	(a,p)	The process ID of the last process to attach or detach the shared memory segment.
ATIME	(a,t)	The time the last attach was completed to the associated shared memory segment.
DTIME	(a,t)	The time the last detach was completed on the associated shared memory segment.
NSEMS	(a,b)	The number of semaphores in the set associated with the semaphore entry.
OTIME	(a,t)	The time the last semaphore operation was completed on the set associated with the semaphore entry.

FILES

/unix	system namelist
/dev/kmem	memory
/etc/passwd	user names
/etc/group	group names

SEE ALSO

msgop(2), semop(2), shmop(2) in the *UNIX System V Programmer Reference Manual*.

BUGS

Things can change while *ipcs* is running; the picture it gives is only a close approximation to reality.

NAME

iXS, iNAT - Honeywell-Bull Unix machines / Honeywell-Bull Uniplus machine diskette compatibility

SYNOPSIS

iXS

iNAT

DESCRIPTION

Mount format Diskettes

Mount format diskettes are not compatible because the Uniplus and Unix operating systems have different characteristics. Therefore, a diskette prepared using *umount* under Uniplus system cannot be restored under Unix system, and vice versa.

Tar or Cpio format Diskettes

The compatibility of *tar* or *cpio* format diskettes depends on whether they have been formatted under Uniplus or Unix operating system.

A diskette formatted on the Unix system is not compatible with the Uniplus system and may only be used by the Unix system. However, a diskette formatted with the **diskformat -ver /dev/fdformat** command on the Uniplus system may be:

written to by Honeywell-Bull Uniplus machine and read by Honeywell-Bull Uniplus machine

written to by Honeywell-Bull Unix machine and read by Honeywell-Bull Uniplus machine

written to and read by both Honeywell-Bull Uniplus machine and Honeywell-Bull Unix machine.

To use an Uniplus diskette on the Honeywell-Bull Unix system, insert the diskette in the Unix system and enter the **iXS** command. At the prompt signal, the Unix system is set up to use diskettes formatted on the Uniplus system. At the end, enter the **iNAT** command.

In order to once more use diskettes formatted on the Honeywell-Bull Unix system, thereby returning to the situation prior to the execution of **iXS**, enter the **iNAT** command.

SEE ALSO

iXS/iNAT: Honeywell-Bull Uniplus machines and Honeywell-Bull Unix machines diskette compatibility in the *System Operations Guide.*

NAME

od - octal dump

SYNOPSIS

od [-bcdosxe] [file] [[+]offset[.][b]] [:[x] nblks [.] [b]]

DESCRIPTION

Od dumps *file*, in one or more formats as selected by the first argument. If the first argument is missing, -o is default. The meanings of the format options are:

-b Interpret bytes in octal.

-c Interpret bytes in ASCII. Certain non-graphic characters appear as C escapes: null=\0, backspace=\b, form=\f, new-line=0 return=\r, tab=\t; others appear as 3-digit octal numbers.

-d Interpret words in unsigned decimal.

-e Trans-codify bytes in EBCDIC.

-o Interpret words in octal.

-s Interpret 16-bit words in signed decimal.

-x Interpret byte in hex.

The *file* argument specifies which file is to be dumped. If no file argument is specified, the standard input is used.

The *offset* argument specifies the offset in the file where dumping is to commence. This argument is normally interpreted as octal bytes. If is appended, the offset is interpreted in decimal. If **b** is appended, the offset is interpreted in block of 512 bytes. If the file argument is omitted, the offset argument must be preceded by =.

The *nblks* argument specifies the number of blocks to be printed out (bytes as default).

Note that : is the only separator permitted between offset and nblks.

Dumping continues until end-of-file.

NAME

conlog - console log

SYNOPSIS

conlog [-e *file*] [-asu]
conlog [-d]

DESCRIPTION

conlog allows a super-user to enable the logging of all the messages displayed on the system console. Optionally, it is possible to request the log of the user messages or the kernel messages only. The log file may then be displayed or printed.

This command may be run from any terminal. Therefore, when the logging is enabled, it is recommended to use not the console but some other terminal to run the view function.

When conlog is running, it is better to only use the console for system administration commands.

The following *options* can be applied:

-e enables the logging; *file* is the pathname of the file to be used as log file.

-a logs all messages.

-s logs the kernel messages only.

-u logs the user messages only.

-d disable the logging.

If the command is launched without parameters a menu will be displayed. The menu is supposed to be self explanatory.

SEE ALSO

Conlog: Console Log in the *System Operations Guide*.

NAME

mustrun - change processor

SYNOPSIS

mustrun filename *N*

DESCRIPTION

This command allows the user to stipulate on which CPU a program will be executed. When a program is run, the system itself is responsible for delagating its execution to CPU 0 or CPU 1. Using the *mustrun* command, the user may address execution of a program to a specific CPU.

The command has two arguments:

filename **is the file with the program to be executed**

N **is the number corresponding to the CPU to which filename execution is addressed. It may assume the following values:**

0 **execution is addressed to CPU 0 (central unit)**

1 **execution is addressed to CPU 1 (expansion unit)**

a **resets previous addressing of a filename to CPU 0 or CPU 1, a restores control of filename execution to the system.**

The mustrun command is printed by the following commands:

file
analyze

NAME

mvdir - move a directory

SYNOPSIS

/etc/mvdir dirname name

DESCRIPTION

Mvdir moves directories within a file system. *Dirname* must be a directory; *name* must not exist. Neither name may be a sub-set of the other (/x/y cannot be moved to /x/y/z, nor vice versa).

Only super-user can use *mvdir*.

SEE ALSO

mkdir(1).

BUGS

Normally it is not a good idea to restart *runacct* in the SETUP state. Run SETUP manually and restart via:

runacct *mmdd* **WTMPFIX**

If *runacct* failed in the PROCESS state, remove the last ptacct file because it will not be complete.

NAME

sadp - disk access profiler

SYNOPSIS

sadp [-th] [-d device] s [n]

DESCRIPTION

Sapd reports disk access location and seek distance, in tabular or histogram form. It samples disk activity once every second during an interval of *s* seconds. This is done repeatedly if *n* is specified. Cylinder usage and disk distance are recorded in units of 8 cylinders.

Valid values of *device* are **st506** (DCS disk controller), **esdi** (DCE or ESD disk controller) and **smd** (removable disk).

The **-d** option may be omitted, if only one *device* is present.

The **-t** flag causes the data to be reported in tabular form.

The **-h** flag produces a histogram on the printer of the data. Default is **-t**.

FILES

/dev/kmem

NAME

sxt - pseudo-device driver

DESCRIPTION

Sxt is a pseudo-device driver that interposes a discipline between the standard *tty* line disciplines and a real device driver. The standard disciplines manipulate *virtual tty* structures (channels) declared by the *sxt* driver. *Sxt* acts as a discipline manipulating a *real tty* structure declared by a real device driver. The *sxt* driver is currently only used by the *shl*(1) command.

Virtual ttys are named by i-nodes in the subdirectory **/dev/sxt**, which must be created by the user, and are allocated in groups of up to eight. To create a file in this directory, use the following command:

mknod /dev/sxt/bln c M m

where:

b is the board number(*)
l is the line number(*)
n is the channel number, in the range [0-7]
M is the major number
m is the minor number

(*) See *Appendix A* in the *System Operations Guide*.

For the major number, choose the value using the following table:

Board number	major
0-1	86
2-3	87
4-5	88
6-7	89
8-9	90
a-b	91

The minor number is calculated as:

m=128*(b%2)+8*s

where **b** is again the board number and **s** is the slot number on the board. b%2 is the remainder of the b/2 division. The file name will be **/dev/sxt/bln**.

Once each node has been created, link the node which the *sxtbln* driver:

ln /dev/sxt/bln /dev/sxtbln

Only one channel, the *controlling* channel, can receive input from the keyboard at a time; others attempting to read will be blocked.

There are two groups of *ioctl*(2) commands supported by *sxt*. The first group contains the standard *ioctl* commands described in *termio*(7), with the addition of the following:

TIOCEXCL Set *exclusive use* mode: no further opens are permitted until the file has been closed.

TIOCNXCL Reset *exclusive use* mode: further opens are once again permitted.

The second group are directives to *sxt* itself. Some of these may only be executed on channel 0.

SXTIOCLINK
Allocate a channel group and multiplex the virtual ttys onto the real tty. The argument is the number of channels to allocate. This command may only be executed on channel 0. Possible errors include:

EINVAL The argument is out of range.

ENOTTY The command was not issued from a real tty.

ENXIO *linesw* is not configured with *sxt*.

EBUSY An SXTIOCLINK command has already been issued for this real tty.

ENOMEM There is no system memory available for allocating the virtual tty structures.

EBADF Channel 0 was not opened before this call.

SXTIOCSWTCH
Set the controlling channel. Possible errors include:

EINVAL An invalid channel number was given.

EPERM The command was not executed from channel 0.

SXTIOCWF Cause a channel to wait until it is the controlling channel. This command will return the error, *EINVAL*, if an invalid channel number is given.

SXTIOCUBLK

Turn off the loblk control flag in the virtual tty of the indicated channel. The error *EINVAL* will be returned if an invalid number or channel 0 is given.

SXTIOCSTAT

Get the status (blocked on input or output) of each channel and store in the *sxtblock* structure referenced by the argument. The error *EFAULT* will be returned if the structure cannot be written.

FILES

/usr/include/sys/sxt.h Driver specific definitions.

SEE ALSO

shl(1), stty(1), ioctl(2), open(2), termio(7).

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